College of Arts and Sciences 2026-2027 Degree Worksheet
B.S. BIOLOGY with Research Concentration

COLLEGE of ARTS & SCIENCES
Language Requirement

All students *who major in the College of Arts & Sciences are required to demonstrate competence in a second language. For complete details:* https://www.gonzaga.edu/college-of-arts-sciences/about/information-for-students/language-requirement-information

	Credits	Sem/Yr

UNIVERSITY CORE REQUIREMENTS:

▶ FUNDAMENTAL CORE COURSES

Year 1: Understanding & Creating

Writing	Credits	Sem/Yr
ENGL 101 Writing *(fulfills 3 credits Writing Enriched)* ▲	3	
Reasoning		
PHIL 101 Reasoning	3	
First Year Seminar		
Dept. 193	3	
Communication & Speech		
COMM 100 Communication & Speech	3	
Math		
MATH *(must be above Math 100)*	3	
Scientific Inquiry (2cr + 1cr lab) *		
BIOL or CHEM or PHYS 104/104L *(taken year 1 or 2)*	3	

Year 2: Being & Becoming

Christianity & Catholic Traditions	Credits	Sem/Yr
RELI *(see approved list)***	3	
Philosophy of Human Nature		
PHIL 201 Philosophy of Human Nature	3	

Year 3: Caring & Doing

World/Comparative Religion	Credits	Sem/Yr
RELI *(see approved list)*** *(fulfills 3cr Global Studies)**	3	
Ethics		
PHIL 301 Ethics **or** RELI 330 Principles-Christian Morality	3	

Year 4: Imagining the Possible

Core Integration Seminar	Credits	Sem/Yr
Dept. 432	3	

NOTE: some courses have pre-requisites, check the catalog carefully!

▶ BROADENING COURSES - *see approved list***

Social & Behavioral Science	Credits	Sem/Yr
	3	
Literature		
	3	
History		
	3	
Fine Arts & Design		
	3	

▶ REQUIRED COURSE DESIGNATIONS - *see approved list***

	Credits	Sem/Yr
▲Writing Enriched	9 total	
Social Justice	3 total	
♦Global Studies	6 total	

*****for list of approved RELI, Broadening & Designated courses, see :*** https://my.gonzaga.edu/academics/undergraduate-programs/general-degree-requirements-procedures/university-core

****BIOL 105/105L meets the Scientific Inquiry requirement of the University Core for Biology Majors & Minors.***

B.S. BIOLOGY-Research Concentration 71-73 CREDITS

LOWER DIVISION — 42 Credits

32 Credits

Course	Course Title	Credits	Grade
BIOL	105/105L Info Flow in Biological Systems + Lab*	4	
BIOL	106 Energy Flow in Biological Systems	3	
BIOL	111 Biology Pathways	1	
BIOL	205/205L Physiology & Biodiversity + Lab	4	
BIOL	206/206L Ecology + Lab	4	
BIOL	207/207L Genetics + Lab	4	
CHEM	101/101L General Chemistry + Lab	4	
CHEM	230/230L Organic Chemistry I + Lab	4	
CHEM	231/231L Organic Chemistry II + Lab	4	

One of the following two-course + lab combinations: ***5 Credits***

PHYS	111/111L General Physics I + Lab	5	
PHYS	121/121L Physics I + Lab	5	

One of the following two-course + lab combinations: ***5 Credits***

PHYS	112/112L General Physics II + Lab	5	
PHYS	122/122L Physics II + Lab	5	

UPPER DIVISION + Research — 29-31 Credits

3 Credits

Course	Course Title	Credits	Grade
BIOL	399 Advanced Topics	2	
BIOL	495 Senior Evaluation	0	
BIOL	499 Senior Colloquium	1	

BIOL Upper Division Electives: ***15 Credits***

(must be approved by an advisor in Biology)*

BIOL	
BIOL	
BIOL	
BIOL	
BIOL	

RESEARCH CONCENTRATION

Complete additional requirements 1 - 7, details Page 2.

11-13 Credits

1.	BIOL 498 Research	4	
2. - 4.	*See page 2*		
5.	BIOL 484 Research Seminar	1	

6. Select one of the following two calculus courses:

MATH 148 Survey of Calculus	3	
MATH 157 Calculus & Analytic Geometry I	4	

7. Complete one of the following:

MATH 121 Introductory Statistics	3	
MATH 321 Statistics for Experimentalists	3	
BIOL 305 Biological Data Analysis	4	

Students must earn a C- grade or better in BIOL 105/105L & BIOL 106 in order to take BIOL 205, 206, or 207. Students must also get a C- grade or better in BIOL 205/205L, 206/206L, 207/207L & BIOL 399 in order to take BIOL 499.

For upper division biology electives, a minimum of 10 credits (B.S.), 6 credits (B.A.), or 4 credits (Minor) must be biology courses taken from Gonzaga faculty. Students participating in study abroad programs should make note.

Credits from BIOL 497 Biology Internship, do not satisfy any requirements for the Biology Major or Minor.

All courses should be chosen in consultation with a Biology faculty advisor.

College of Arts and Sciences 2026-2027 Degree Worksheet

B.S. BIOLOGY with Research Concentration

The Research Concentration is designed to make research experiences available to more students, to show students the value of science education outreach through experiential learning, and to provide students with a more solid foundation in biological mathematics and science communication. It consists of a number of courses and experiences designed to prepare students to pursue research in some venue (graduate school, industry, government, medical school, or science education) after graduation. Students can enter the program at any time, although we anticipate most students will enter the program as sophomores or juniors.

To complete the Research Concentration, the following requirements are <u>added</u> to the requirements for the B.S. degree in Biology:

1. Participate in a significant research experience. This means working on an independent research project for the equivalent of **<u>4 credits</u>**. Most students can fulfill this requirement in one summer of full-time research or four academic semesters of research while enrolled in other classes. Enrolling in the Research Concentration does not guarantee a research experience. It is the student's responsibility to secure a research position. This requirement can be fulfilled by working with a GU faculty member, or with <u>prior</u> permission, with a faculty member at a different institution.

2. Present the results from the independent research (in oral or poster format) to the scientific community at an event organized for that purpose.

3. Write up the research results under advisement with the your research mentor. Final papers will be turned in to the Research Coordinator the last month of the final semester you are enrolled at Gonzaga. If you did research off campus, see the Research Coordinator to arrange a local writing mentor.

4. Participate in science education outreach for 16 hours one semester (BIOL 295/CHEM 295 - 0 credits).

5. Take BIOL 484 Research Seminar (**<u>1 credit</u>**) ***<u>AND</u>*** attend a minimum of 12 biology-related seminars (including those in BIOL 484), and write and submit a seminar reflection for each seminar.

6. Take a college calculus course (MATH 148 Survey of Calculus (**<u>3cr</u>**) **or** MATH 157 Calculus and Analytic Geometry I (**<u>4cr</u>**)).

7. Complete a statistics course (MATH 121 **or** MATH 321)(**<u>3 credits</u>**) **or** a biological mathematics course, BIOL 305 Biological Data Analysis (**<u>4 credits</u>**).